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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S): CHU et al.
SERIAL NO.: 10/646,980
FILED: August 22, 2003
FOR: Compounds and Methods for the Treatment of Cancer
GROUP ART UNIT: 1614
EXAMINER: James Henry Alstrum Acevedo

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUBMISSION OF HARD COPIES OF DOCUMENTS PREVIOUSLY DISCLOSED

SIR:

Enclosed are copies of the non-U.S. patent prior art documents disclosed in an Information Disclosure Statement for the above-identified divisional application dated March 1, 2004. These documents, previously submitted in a parent application, were apparently misplaced in the USPTO and we are fulfilling a request by the Examiner to supply the documents again. This prior art was cited in parent application serial number 08/390,633.

Respectfully submitted,

Coleman Sudol Sapone, P.C.

By 
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Dated: March 6, 2006

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: "Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450" on March 6, 2006.



Harold Hull



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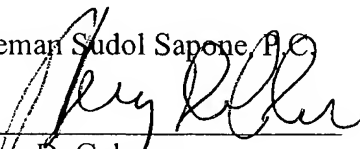
INFORMATION DISCLOSURE STATEMENT

SIR:

Pursuant to the Duty to Disclose under 37 C.F.R. §1.56(a), applicant encloses herewith a copy of Form PTO-1449 listing patent and other documents relevant to the background of the invention described and claimed in the above-identified application. These patents/references were also cited in parent application serial number 08/390,633, of which the present application is a divisional. It is, therefore, respectfully submitted that the Examiner is already aware of the references which are set forth in the enclosed Form PTO-1449. Copies of the listed documents are therefore not enclosed.

Respectfully submitted,

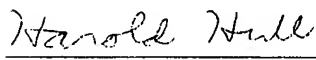
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INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Att'y Ref: G25-078	Serial No: 10/646,980
	Applicant: CHU et al.	
	Filing Date: 22 August 2003	Art Unit: 1614

United States Patent Documents						
Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date
	4,000,137	12/1976	Dvonoch et al.			
	4,336,381	06/1982	Nagata et al.			
	4,861,759	08/1989	Mitsuya et al.			
	4,879,277	11/1989	Mitsuya et al.			
	4,900,828	02/1990	Belica et al.			
	4,916,122	04/1990	Chu et al.			
	4,963,533	10/1990	De Cleroq et al.			
	4,968,674	11/1990	Taniyama et al.			
	5,041,449	08/1991	Belleau et al.			
	5,047,407	09/1991	Belleau et al.			
	5,059,690	10/1991	Zahler et al.			
	5,071,983	12/1991	Koszalka et al.			
	5,151,426	09/1992	Belleau et al.			
	5,179,104	01/1993	Chu et al.			
	5,185,437	02/1993	Koszalka et al.			
	5,204,466	04/1993	Liotta et al.			
	5,210,085	05/1993	Liotta et al.			
	5,234,913	08/1993	Furman, Jr. et al.			
	5,248,776	09/1993	Chu et al.			
	5,270,315	12/1993	Belleau et al.			

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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered; Include a copy of this form with next communication to the applicant.	

	5,444,063	08/1995	Schinazi			
	5,466,806	11/1995	Belleau et al.			

Foreign Patent Documents							
Examiner Initial	Publication Number	Publication Date	Country	Class	Subclass	Translation	
						Yes	No
	0 206 497	12/1986	Europe				
	0 217 580	04/1987	Europe				
	0 337 713	10/1989	Europe				
	0 352 248	01/1990	Europe				
	0 375 329	06/1990	Europe				
	0 382 526	08/1990	Europe				
	0 433 898	12/1990	Europe				
	0 494 119	07/1992	Europe				
	0 515 144	11/1992	Europe				
	0 515 156	11/1992	Europe				
	0 515 157	11/1992	Europe				
	0 526 253	02/1993	Europe				
	88/07532	10/1988	WIPO				
	90/12023	10/1990	WIPO				
	91/11186	08/1991	WIPO				
	91/17159	11/1991	WIPO				
	92/10496	06/1992	WIPO				
	92/10497	06/1992	WIPO				
	92/14729	09/1992	WIPO				
	92/14743	09/1992	WIPO				
	92/15308	09/1992	WIPO				
	92/18517	10/1992	WIPO				
	92/21676	10/1992	WIPO				
	94/14456	07/1994	WIPO				
	94/27616	12/1994	WIPO				

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	95/18137	07/1995	WIPO			
	95/20595	08/1995	WIPO			
	95/21183	08/1995	WIPO			

Examiner Initial	Other Documents (by Title, Author Date, Pertinent Pages, Etc.)
	Ball, C.R., "Transplantable Colon Tumors as Chemotherapy Screening Models", <i>Cancer (Phila.)</i> 36:2437-2440 (1975).
	Balzarini, J. et al., "Potent and Selective Anti-HTLV-III/LAV Activity of 2',3'-Dideoxycytidine...." <i>Biochem. Biophys. Res. Commun.</i> 140(2):735-742 (1986).
	Beach, J.W., et al., "Synthesis of Enantiomerically Pure (2'R,5'S)--(-)-1+[2-(hydroxymethyl)thiolan-5-7]Cytosine...." <i>J. Org. Chem.</i> 57:2217-2219 (1992).
	Belleau, B., et al., "Design and Activity of a Novel Class of Nucleoside Analogs...." <i>Int. Conf. On AIDS</i> , Montreal, Quebec, Canada, Jun. 4-9, 1989.
	Bouffard, D.Y., et al., "Kinetic Studies on 2',2'-Difluorodeoxycytidine (gemcitabine)...." <i>Biochem. Pharmacol.</i> 45:1857-1861 (1993).
	Carter, et al., "Activities of (-)-Carbovir and 3'-Azido-3'-Deoxythymidine Against...." <i>Antimicrobial Agents and Chemotherapy</i> , 36(6):1297-1300 (1990).
	Chang, C-N., et al., "Biochemical Pharmacology of (+) and (-)-2',3'-Dideoxy-3'-thioacytidine as Anti-Hepatitis B Virus Agents" <i>J. Biol. Chem.</i> 267:22414-22420 (1992).
	Chang, Chein-Neng et al., "Deoxycytidine Deaminase-Resistant Stereoisomer" <i>J. Biol. Chem.</i> , 357(20):13938-13942 (1992).
	Chang, Chungming, et al., "Production of Hepatitis B Virus in vitro by Transient Expression...." <i>The EMBO J.</i> 6(3):675-680 (1987).
	Chen, Chin-Ho, et al., "Delayed Cytotoxicity and Selective Loss of Mitochondrial DNA in Cells..." <i>J. Biol. Chem.</i> 265 (20):11934-11937 (1989).
	Cheng, Y.C., et al., "Human Deoxycytidine Kinase Purification and Characterization...." <i>Biochim. Biophys. Acta</i> 481:481-492 (1977).
	Chottiner, E.G., "Cloning and Expression of Human Deoxycytidine Kinase cDNA"

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	<i>Proc. Natl. Acad. Sci. USA</i> , 88:1531-1535 (1991).
	Chu, C.K., et al., "An Efficient Total Synthesis of 3'-Azido-3'-Deoxythymidine (AZT) and 3'-Azido-2',3'-Dideoxyuridine (AZDDU, CS-87)...." <i>Tetrahedron Lett.</i> 5349 (1988).
	Chu, et al., "Comparative Activity of 2',3'-Saturated and Unsaturated Pyrimidine and Purine Nucleosides...." <i>Biochem. Pharm.</i> 37(19):3543-3548 (1988).
	Chu, et al., "Structure-Activity Relationships of Pyrimidine Nucleosides as Antiviral Agents...." <i>J. Med. Chem.</i> 32:612 (1989).
	Chu, C.K. et al., "2'-Fluoro-5-Methyl- β -L-Arabinofuranosyluridine (L-FMAU) as a Novel Antiviral Agent for Hepatitis B...." <i>Antimicrob. Agents Chemother.</i>
	Coates, J. et al., "The Separated Enantiomers of 2'-deoxy-3'-thiacytidine (BCH-189)..." <i>Antimicrob. Agents Chemother.</i> 36:202-205 (1992).
	Cretton, E., et al., "Catabolism of 3'-Azido-3'-Deoxythymidine in Hepatocytes and Liver Microsomes...." <i>Molecular Pharmacology</i> 39:258-255 (1991).
	Cretton, E., et al., "Pharmokinetics of 3'-Azido-3'-Deoxythymidine..." <i>Antimicrobial Agents and Chemotherapy</i> 35(5):801-807 (1991).
	Di Bisceglie, Adrian M., Rutsgi, Vinod K. et al., "Hepatocellular Carcinoma" NIH Conference, <i>Annals of Internal Medicine</i> 108:390-401 (1988).
	Di Marco, M.P. et al. "High-Performance Liquid Chromatographic Determination of the Isomeric Purity of a Series of Dioxolane Nucleoside Analogs" <i>J. Chromatogr.</i> 645:107-114 (1993).
	Doong, Shin-Lian., et al., "Inhibition of the Replication of Hepatitis B Virus in vitro...." <i>Proc. Natl. Acad. Sci. USA</i> 88:8495-8499 (1991).
	Evans, David A., et al., "New Procedure for the Direct Generation of Titanium Enolates...." <i>J. Am. Chem. Soc.</i> , 112:8215-8216 (1990).
	Finlay, G. J., et al., "A Semiautomated Microculture Method for Investigating Exponentially Growing Carcinoma Cells" <i>Anal. Biochem.</i> , 139:272-277 (1984).
	Furman, et al., "The Anti-Hepatitis B Virus Activities, Cytotoxicities and Anabolic Profiles...." <i>Antimicrob. Agents and Chemother.</i> , 36(12):2686-3692 (1992).
	Ganem, Don et al., "The Molecular Biology of the Hepatitis B Viruses" <i>Ann. Rev. Biochem.</i> , 56:651-693 (1987).
	Gosselin, G., "Enantiomeric 2',3'-Deoxycytidine Derivatives are Potent Human Immunodeficiency Virus Inhibitors in Cell Culture" <i>C.R. Acad. Sci. Paris Sci. Vie</i>

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	317:85-89 (1994).
	Jeong, L., et al., "Asymmetric Synthesis and Biological Evaluation of β -L-(2R,5S)- and α -L-1(2R,5R)-1,3-Oxathiolane-Pyrimidine and -Purine Nucleosides and Potential Anti-HIV Agents" <i>J. Med. Chem.</i> , 36: (1993).
	Kassianides, Chris, et al., "Inhibition of Duck Hepatitis B Virus Replication by 2',3'-Dideoxycytidine" <i>Gastroenterology</i> 33:6899-6902 (1992).
	Kim, H. O., et al., "Potent Anti-HIV and Anti-HBV Activities of (-)-L- β -Dioxolane-C...." <i>Tetrahedron Lett.</i> , 33:6899-6902 (1992).
	Kim, H.O., et al., "L- β -(2S,4S)-and L- α -(2S,4R)-Dioxolanyl Nucleosides as Potential Anti-HIV Agents...." <i>J. Med. Chem.</i> 36:519-528 (1993).
	Kim, H.O., et al., "13-Dioxolanylpurine Nucleosides (2R,4R) and (2R,4S) with Selective Anti-HIV-1 Activity...." <i>J. Med. Chem.</i> 36:30-37 (1993).
	Krenitsky, T.A. et al., "3'-Amino-2',3'-Dideoxyribonucleosides of Some Pyrimidines: Synthesis and Biological Activities" <i>J. Med. Chem.</i> 26 (1983).
	Kukhanova, M., et al., "L- and D-Enantiomers of 2',3'-Dideoxycytidine...." <i>J. Biol. Chem.</i> 270(39): 23056-23059 (1995).
	Lee, Bonita et al., "In Vitro and In Vivo Comparison of the Abilities of Purine and...." <i>Antimicrobial Agents and Chemotherapy</i> 33(3):336-339 (1989).
	Lin, T.S. et al., "Antiviral Activity of 2',3'-Dideoxy- β -L-5-fluorocytidine (β -L-FddC) Against Hepatitis B Virus...." 1:65-68 (1991).
	Lin, et al., "Potent and Selective In Vitro Activity of 3'-Deoxythymidine-2-Ene-...." <i>Biochem. Pharm.</i> 36(17):2716 (1987).
	Mansuri, M.M. et al. "Preparation of the Geometric Isomers of DDC, DDA, D4C and D4T...." <i>Bioorg. Med. Chem. Lett.</i> 1:65-68 (1991).
	Matthes, E., et al., "Potent Inhibition of Hepatitis B Virus Production In Vitro by Modified" <i>Anti. Agents and Chemother.</i> 34(10):1986-1990 (1990).
	Miller, Roger H., et al., "Common Evolutionary Origin of Hepatitis B Virus and Retroviruses" <i>Proc. Natl. Acad. Sci. USA.</i> 83:2531-2535 (1986).
	Mitsuya, H. et al., "3'-Azido-3'-Deoxythymidine (BW A 509U): An Antiviral Agent that Inhibits...." <i>Proc. Natl. Acad. Sci., USA</i> 82:7097-7100 (1985).
	Mitsuya, H., et al., "Rapid In Vitro Systems for Assessing...." <i>AIDS: Modern Concepts and Therapeutic Challenges</i> . S. Broder, Ed.p. 303, Marcel-Dekker, New York (1987).
	Mitsuya, H., et al., "Molecular Targets for AIDS Therapy" <i>Science</i> 249:1533-1544

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	(1990).
	Norbeck, D., et al., "A New 2',3'-Dideoxynucleoside Prototype with In Vitro Activity Against HIV" <i>Tetrahedron Lett.</i> , pp. 6263-6266 (1989).
	Okabe, M., et al., "Synthesis of the Dideoxynucleosides ddC and CNT" <i>J. Org. Chem.</i> 53(20):4780-4786 (1988).
	Ometto, M., et al., "In Vitro Biochemical Tests to Evaluate the Response to Therapy of Acute Leukemia with..." <i>Semin. Oncol.</i> 14:231-237 (1987).
	Richman, D.D., et al., "The Toxicity of Azidothymidine (AZT) in the Treatment of Patients with AIDS...." <i>N. Eng. J. Med.</i> , 317:192 (1987).
	Satsumabayashi, S. et al., "The Synthesis of 1,3-Oxathiolane-6-one Derivatives.: <i>Bull. Chem. Soc. Japan</i> 45:913 (1972).
	Schinazi, R.F., et al., "Activities of the Four Optical Isomers of 2',3'-Dideoxy-3'-Thiacytidine...." <i>Antimic. Agents & Chemother.</i> 36(3):672-676 (1992).
	Schinazi, R.F., et al., "Insights into HIV Chemotherapy" <i>AIDS Research and Human Retroviruses</i> 8(6):963-990 (1992).
	Schinazi, R.F., et al., "Pharmacokinetics and Metabolism of Racemic 2',3'-Dideoxy-5-Fluoro-3'-Thiacytidine in Rhesus Monkeys" <i>Antimicrobial Agents and Chemotherapy</i> 36(11):2432-2438 (1992).
	Schinazi, R.F., et al., "Selective Inhibition of Human Immunodeficiency Viruses...." <i>Antimicrobial Agents and Chemother.</i> 36(11):2423-2431 (1992).
	Schinazi, R. F., et al., "Substrate Specificity of Escherichia coli Thymidine Phosphorylase for Pyrimidine...." <i>Biochem. Pharm.</i> 44(2):199-204 (1992).
	Sells, Mary ann, et al., "Production of Hepatitis B Virus Particles in Hep G2 Cells...." <i>Proc. Natl. Acad. Sci. USA</i> 84:1005-1009 (1987).
	Soudeyns, H., et al., "Anti-Human Immunodeficiency Virus Type 1 Activity and In Vitro Toxicity of 2'-Deoxy-3'-Thiacytidine...." <i>Antimicrobial Agents and Chemotherapy</i> 35(7):1386-1990 (1991).
	Sterzycki, R.Z., et al., "Synthesis and Anti-HIV Activity of Several 2'-Fluoro-Containing Pyrimidine Nucleosides" <i>J. Med. Chem.</i> 33(8): 2150-2157 (1990).
	Storer, R., et al., "The Resolution and Absolute Stereochemistry of the Enantiomers of cis-1-2-(Hydromethyl-1,3-Oxathiolan-5-yl)cytosine...." <i>Nucleosides & Nucleotides</i> 12(2):225-236 (1993).
	Sureau, C., et al., "Preparation of Hepatitis B Virus by a Differentiated Human Hepatoma Cell Line After Transfection with Cloned Circular HBV DNA" <i>Cell</i> 47:37-

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	47 (1986).
	Tsurimoto, Toshiki et al., "Stable Expression and Replication of Hepatitis B Virus Genome..." <i>Proc. Natl. Acad. Sci. USA</i> 84:444-448 (1987).
	Volk, Wesley A., editor, "Hepatitis" <i>Essentials of Medical Microbiology</i> , J.B. Lippincott Company, (Philadelphia/Toronto) 2 nd Ed. pp. 609-618 (1982).
	Vorbruggen, et al., "Nucleoside Synthesis with Trimethylsilyl Triflate and Perchlorate as Catalysts" <i>Chem. Ber.</i> 114:1234-1255 (1981).
	Wilson, L.J. et al., "The Synthesis and Anti-HIV Activity of Pyrimidine Dioxolanyl Nucleosides ." <i>Bioorganic & Medicinal Chemistry Letters</i> 3(2):169-174 (1993).
	Wilson, L.J. et al., "A General Method for Controlling Glycosylation Stereochemistry in the Synthesis...." <i>Tetrahedron Lett.</i> 31(13):1815-1818 (1990).
	World Health Organization. "Progress in the Control of Viral Hepatitis: Memorandum from a WHO Meeting." <i>Bulletin of the World Health Organization.</i> 66(4):443-455 (1988).
	Yokota et al., "Comparative Activities of Several Nucleoside Analogs Against Duck...." <i>Antimicrobial Agents and Chemotherapy</i> . 34:1326-1330 (1990).
	Zhu, Zhou, et al., "Cellular Metabolism of 3'-Azido-2',3'-Dideoxyuridine with Formation of 5'-)-Diphosphohexase..." <i>Molecular Pharmacology</i> 38:929-938 (1990).

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